

Claims

[c1] What is claimed is:

1. An antenna for wireless communication comprising:
a radiator for receiving and transmitting radio frequency (RF) signals comprising a plurality of recesses formed on the side of the radiator;
a feeding plate stretching out from the radiator for transmitting the RF signals; and
a ground plate stretching out from the radiator for grounding.

[c2] 2. The antenna of claim 1 further comprising a substrate, wherein the radiator is formed on the substrate, and the substrate further comprises a plurality of apertures so that the feeding plate and the ground plate penetrate the substrate via the plurality of apertures.

[c3] 3. The antenna of claim 2 wherein the substrate comprises a long side and a short side, and the feeding plate and the ground plate are installed along the short side.

[c4] 4. The antenna of claim 1 further comprising a ground plane, wherein the ground plate is connected to the ground plane.

- [c5] 5.The antenna of claim 4 wherein the ground plane is formed on the substrate.
- [c6] 6.The antenna of claim 1 further comprising a trench formed between the feeding plate and the ground plate.
- [c7] 7.The antenna of claim 1 being installed on a printed circuit board.
- [c8] 8.The antenna of claim 1 wherein the plurality of recesses is arranged asymmetrically on the two sides of the radiator.
- [c9] 9.The antenna of claim 1 wherein the plurality of recesses is arranged symmetrically on the two sides of the radiator.
- [c10] 10.The antenna of claim 1 wherein the plurality of recesses is irregular.
- [c11] 11.An antenna for wireless communication comprising:
 - a substrate having a long side, a short side, and two apertures formed along the short side and penetrating the substrate;
 - a radiator formed on the upper surface of the substrate for receiving and transmitting RF signals comprising a plurality of recesses formed on the side of the radiator;
 - a feeding plate connected to the radiator via the aper-

tures for transmitting the RF signals;
a ground plane formed on the lower surface of the substrate;
a ground plate connected to the radiator and the ground plane via the apertures; and
a trench formed between the feeding plate and the ground plate.

- [c12] 12.The antenna of claim 11 being installed on a printed circuit board.
- [c13] 13.The antenna of claim 11 wherein the plurality of recesses is arranged asymmetrically on two side of the radiator.
- [c14] 14.The antenna of claim 11 wherein the plurality of recesses is arranged symmetrically on two side of the radiator.
- [c15] 15.The antenna of claim 11 wherein the plurality of recesses is irregular.